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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,408	02/10/2004	K. C. Chiam	640P002	8878

42754 7590 06/27/2005

NIELDS & LEMACK  
176 EAST MAIN STREET, SUITE 7  
WESTBORO, MA 01581

EXAMINER
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LEWIS, AARON J

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/775,408

Applicant(s)

CHIAM, K. C.

Examiner

AARON J. LEWIS

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The term "...N95 performance and other high performance standards in air permeability..." in claim 1 is a relative term which renders the claim indefinite. The term "...other high performance standards..." is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Additionally, the terminology 'N95 performance standards' while possibly current may be changed with time for a variety of reasons including improvements in the state of the art and as such is not definite as to exactly what applicant regards as his invention. To the extent possible, it is suggested that applicant amend the claim to include those physical characteristics that enable the claimed respiratory mask to perform a given function(s) that is/are consistent with the N95 performance standards.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-3,12 are rejected under 35 U.S.C. 102(b) as being anticipated by Haber et al. ('307).

As to claim 1, Haber et al. disclose a respiratory mask that conforms to N95 performance and other standards in air permeability for improved air circulation, the respiratory mask having a mask body (1) and a headband (10) for putting on the respiratory mask to the face of a wearer, the mask body comprising: an inside mask (4,16); an outside mask (2,18), the inside mask having two or more filter layers (4,16 and col.2, lines 67-68), the outside mask having two or more filter layers (2,18 and col.2, lines 67-68); at least one inside mask spacer (12) inserted between the filter layers of the inside mask to generate space between different filter layers of the inside mask; and at least one outside mask spacer (12) inserted between the filter layers of the outside mask to generate space between different filter layers of the outside mask so that when air is discharged by the wearer, the spacers together with the filter layers provide a pumping effect to blow out carbon dioxide given off by the wearer to the surroundings and to take in air from the surroundings for the wearer. While Haber et al. may not expressly disclose the intended result of creating a pumping effect, it does recite the claimed structural elements and as such is fully capable of performing the recited function of providing a pumping effect to blow out carbon dioxide given off by the wearer to the surroundings.

As to claim 2, wherein after a prolonged period of use of the respiratory mask by the wearer, and there is insufficient exchange of exhaled air with the air from the surroundings, the spacer enables the puffing up of the mask, thereby increasing the

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size of the respiratory mask so as to provide a visual check on the choking of the mask of the wearer.

As to claim 3, the spacer (12) of Haber et al. acts as a semi-rigid supporting frame to prevent the respiratory mask from collapsing during inhalation.

As to claim 12, Haber et al. disclose layers (2,4) to be foam.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haber et al. ('307).

As to claims 4-10, the spacer (12) of Haber et al. is illustrated as being of rectangular cross section; however, since applicant has not provided any criticality for any particular cross sectional shape, the particular cross sectional shape of the spacer of Haber can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular cross sectional shape. It is submitted that one cross sectional shape for the spacer of Haber et al. would have maintained separation filter layers as well as any other cross sectional shape.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haber et al. ('307) in view of (Walker ('276).

The difference between Haber et al. and claim 13 is a neck curtain of sufficient length to cover the neck and any voluminous, thick and stuff beard of a wearer.

Walker (figs.3,4) teaches a neck curtain (105) used in combination with a face mask, the neck curtain being of sufficient length to cover the neck and any voluminous, thick and stuff beard of a wearer for the purpose of providing a protective neck cover that is breathable yet prevents debris from contacting a wearer's skin and also traps debris thereby preventing it from reentering the surrounding atmosphere (col.3, lines 7-50).

It would have been obvious to modify the mask of Haber et al. to include a neck curtain of sufficient length to cover the neck and any voluminous, thick stuff beard of a wearer because it would have provided a protective neck cover that is breathable yet prevents debris from contacting a wearer's skin and also traps debris thereby preventing it from reentering the surrounding atmosphere as taught by Walker.

#### ***Allowable Subject Matter***

8. Claims 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

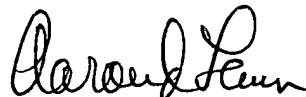
#### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The balance of the art is cited to show relevant respiratory masks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON J. LEWIS whose telephone number is (571) 272-4795. The examiner can normally be reached on 9:30AM-6:00PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY A. BENNETT can be reached on (571) 272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AARON J. LEWIS  
Primary Examiner  
Art Unit 3743

Aaron J. Lewis  
June 17, 2005